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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,724	02/17/2006	Thomas Schafer	EL222943APCT	7151
324 7590 03/20/2009 JoAnn Villamizar Ciba Corporation/Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591				
EXAMINER				
CHANG, CELIA C				
ART UNIT		PAPER NUMBER		
1625				
MAIL DATE		DELIVERY MODE		
03/20/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/568,724

**Applicant(s)**

SCHAFFER ET AL.

**Examiner**

Celia Chang

**Art Unit**

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 22 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 9-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 14-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's election with traverse of Group II in the reply filed on Dec. 22, 2008 is acknowledged. The traversal is on the ground that applicants proposed to rejoin group III and submitted that a search for the core would included the heterocyclic units. This is not found persuasive because a search for the core without additional heterocyclic moieties is in class 546 subclass 330 which would not be coextensive with other heterocyclic moieties and classification for such compounds cannot be determined without a species election. The examiner would considered rejoin claim 5 to the extend that X, Y, W do not contain nonheterocyclic moieties.

The requirement is still deemed proper and is therefore made FINAL.

Claims 9-12 (please note claim 12 has been amended to a device claim) and 13 and the scope of claim 1-8, reading on containing heterocyclic moieties are withdrawn from consideration. Claims 1-8, and newly added claims 14-16 reading on X, Y W containing non-heterocyclic moieties are prosecuted.

2. Claims 1 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Please note that the scope encompassed the condition wherein the moieties are optionally substituted by E *and/or* interrupted by D. E is selected from OR5, SR5...etc. and D is -CO-, -COO-, -O-.....etc. How is it being interrupted? O-O-R5 ??? please note this is a per oxide, which is highly unstable to be used as a electroeluminescent. Further, the substituents can be further fused and further substituted by substituents further substituted by E, D or G which is very confusing and convoluted. Claims should be understood by a simple reading. Especially, the claims are drawn to compounds which must be enabled as with the starting material and stability of the product for the described utility. Such convoluted scope failed to provide the meets and bounds of what compound is in or what compound is out or what are the claimed compounds, thus is indefinite.

3. Claims 1-8, 14-15 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for scope of claim 16 wherein X is unsubstituted or simple substituted aromatic moieties such as the elected species, does not reasonably provide enablement for the convoluted scope of the base claims. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

As correlated to the above second paragraph rejection, the starting material and how to make such compounds are lacking. One must figure out what compound it is by mixing and matching the enormous Markush elements then to look for material and how to make such compounds. Absent of starting material, the application provided mere language rather than enablement. Applicants are entitled to protection of material and prima facie variation of the material being made by the specification, the convoluted scope of the claims is inconsistent with the operability of the disclosed compounds.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-8, 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurfuerset et al. CA111:115053 or CA111:232515 or Svobodava et al. CA 105:160475.

Please note the compounds with structural delineation in the references. For the base claims wherein W, X and Y can be phenyl, biphenyl or terphenyl, the compounds of Svobodava et al. and the compounds of Kurfuerset et al. wherein only one terphenyl is applicable. For compound of claim 16, RN 122504-27-2 anticipates the claim.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurfuerst et al. CS 257977; CA111:115053 or CA111:232515 or Svobodava et al. CA 105:160475 in view of Marrocco et al. US 2002/0028347, supplemented with Wang et al. CA145. All references are analogous art on the luminescent compounds with repeating aromatic units.

*Determination of the scope and content of the prior art (MPEP §2141.01)*

The Kurfuerst et al. and Svobodava et al. disclosed anticipatory compounds having luminescent properties.

*Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)*

The difference between the instant claim and the prior art exemplified compounds is that the repeating aromatic unit is not fluorenyl. Marrocco et al. '347 described optional choices of the repeating aromatic units including those disclosed by Kurfuerst or Svobodava and taught that the fluorenyl moiety is an optional design choice for such material see p.7 generic description and p.13 example 25.

*Finding of prima facie obviousness—rational and motivation (MPEP §2142-2143)*

One having ordinary skill in the art is deemed to be aware of all the pertinent art in the field. The above references placed the pyridinyl luminescent compounds and its optional choices of repeating aromatic moieties in the possession of artisan having ordinary skill. The modification of one proven compound (Kurfuerst or Svobodava) with a design choice of equivalency (Marrocco p. 8, terphenyl and fluorenyl) is prima facie obvious since clear motivation of choosing among the many described and enabled options in repeating aromatic moieties have been taught in the reference to have the desired luminescent property. The Wang reference although published after the application, is hereby provided as evidence to show that the success in achieving luminescent property is indeed expected.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-8, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikai et al. EP 1,202,608.

*Determination of the scope and content of the prior art (MPEP §2141.01)*

Ikai et al. is analogous art on luminescent compounds with repeating aromatic units. A tri-terphenyl substituted example was disclosed on p.22 with a phenyl core.

*Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)*

The difference between the claims and the prior art species is that the core is a phenyl instead of a pyridinyl of the instant claims. Generically, Ikai disclosed that the central core of

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the compounds can be phenyl (see formula a6 p.4, X are C) or pyridinyl (one of X is N), R is hydrocarbons or fluorocarbons.

*Finding of prima facie obviousness—rational and motivation (MPEP §2142-2143)*

One having ordinary skill in the art would be motivated to modify the compound of p.22 with the generic teaching in picking and choosing the pyridinyl central ring because one skilled in the art would expect all the generically disclosed compounds would have the described utility i.e. having luminescent property. In absent of unexpected result, there is nothing unobvious in picking some among many. In re Lemin 141 USPQ 814.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-8, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurfuerst et al. CS256977; CA111:115053 or CA111:232515 or Svobodava et al. CA 105:160475 in view of

Ikai et al. EP 1,202,608 (recited on 1449) or vice versa. All references are analogous art on the luminescent compounds with repeating aromatic units

*Determination of the scope and content of the prior art (MPEP §2141.01)*

Kursfurest et al. or Svobodava et al. disclosed luminescent compounds with a pyridinyl core and repeating phenyl units including at least one terphenyl. Ikai et al. '608, disclosed three repeating fluoro-aromatic units being terphenyl compounds with a phenyl core see p.22, EP 1202608 (recited on a 1449).

*Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)*

The difference between Kursfurest or Svobodava and the instant claims is that a compound having pyridinyl core with three terphenyl is not exemplified. While the Ikai et al. '608 differ from the instant elected species is that the central core is phenyl but taught that an optional choice can be pyridinyl.

*Finding of prima facie obviousness—rational and motivation (MPEP §2142-2143)*

One having ordinary skill in the art in possession of the above reference would be motivated to modify the Kursfurest et al. or Svobodava compounds with three terphenyl substitutions because Ikai et al. evidenced that three terphenyl substitution would not affect the luminescent activity. One having ordinary skill in the art would be motivated to modify the Ikai et al. compound with a pyridinyl core because Kursfurest or Svobodava evidenced that the generic option of one of the X is N would have the desired luminescent activity and would be a successful picking among the various Markush elements. The modification of a proven compound with known attributes of another proven compound is prima facie obvious because the proven attributes would be the motivation of arriving successful compounds.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Celia Chang, Ph. D. whose telephone number is 571-272-0679. The examiner can normally be reached on Monday through Thursday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet L. Andres, Ph. D., can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*OACS/Chang*  
*Mar. 16, 2009*

*/Celia Chang/*  
*Primary Examiner*  
*Art Unit 1625*